5/9



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/957,458B

DATE: 05/13/2003 TIME: 16:15:14

Input Set : A:\US09957458.ST25.txt

Output Set: N:\CRF4\05132003\I957458B.raw

See page 6,

```
3 <110> APPLICANT: Chen, Una
      5 <120> TITLE OF INVENTION: Method for growing stem cells
      7 <130> FILE REFERENCE: P66567US0
      9 <140> CURRENT APPLICATION NUMBER: US 09/957,458B
     10 <141> CURRENT FILING DATE: 2001-09-21
     12 <150> PRIOR APPLICATION NUMBER: PCT/EP00/08247
     13 <151> PRIOR FILING DATE: 2000-08-24
     15 <150> PRIOR APPLICATION NUMBER: EP 99116533
     16 <151> PRIOR FILING DATE: 1999-08-24
     18 <160> NUMBER OF SEQ ID NOS: 10
     20 <170> SOFTWARE: PatentIn version 3.2
                                                                 ENTERED
     22 <210> SEQ ID NO: 1
     23 <211> LENGTH: 7969
     24 <212> TYPE: DNA
    25 <213> ORGANISM: Artificial Sequence
    27 <220> FEATURE:
    28 <223> OTHER INFORMATION: Vector for transforming supporting cell with a foreign to
express
    29
             a gene product of interest
    32 <220> FEATURE:
    33 <221> NAME/KEY: misc_feature
    34 <222> LOCATION: (39)..(41)
    35 <223> OTHER INFORMATION: n is a, c, g, or t
    37 <220> FEATURE:
    38 <221> NAME/KEY: misc_feature
    39 <222> LOCATION: (87)..(87)
    40 <223> OTHER INFORMATION: n is a, c, g, or t
    42 <220> FEATURE:
    43 <221> NAME/KEY: misc_feature
    44 <222> LOCATION: (650)...(650)
    45 <223> OTHER INFORMATION: n is a, c, g, or t
    47 <220> FEATURE:
    48 <221> NAME/KEY: misc_feature
    49 <222> LOCATION: (657)..(657)
```

53 <221> NAME/KEY: misc_feature 54 <222> LOCATION: (679)..(679)

58 <221> NAME/KEY: misc_feature 59 <222> LOCATION: (723)..(723)

52 <220> FEATURE:

57 <220> FEATURE:

62 <220> FEATURE:

50 <223> OTHER INFORMATION: n is a, c, g, or t

55 <223> OTHER INFORMATION: n is a, c, g, or t

60 <223> OTHER INFORMATION: n is a, c, g, or t

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/957,458B

DATE: 05/13/2003 TIME: 16:15:14

```
63 <221> NAME/KEY: misc_feature
 64 <222> LOCATION: (762)..(762)
 65 <223> OTHER INFORMATION: n is a, c, g, or t
 67 <220> FEATURE:
 68 <221> NAME/KEY: misc feature
 69 <222> LOCATION: (764)..(764)
 70 <223> OTHER INFORMATION: n is a, c, g, or t
 72 <220> FEATURE:
 73 <221> NAME/KEY: misc_feature
 74 <222> LOCATION: (792)..(792)
 75 <223> OTHER INFORMATION: n is a, c, g, or t
 77 <220> FEATURE:
 78 <221> NAME/KEY: misc_feature
 79 <222> LOCATION: (834)..(834)
 80 <223> OTHER INFORMATION: n is \acute{a}, c, g, or t
 82 <220> FEATURE:
 83 <221> NAME/KEY: misc_feature
 84 <222> LOCATION: (858)..(858)
 85 <223> OTHER INFORMATION: n is a, c, g, or t
 87 <220> FEATURE:
 88 <221> NAME/KEY: misc_feature
 89 <222> LOCATION: (863)..(863)
90 <223> OTHER INFORMATION: n is a, c, g, or t
 92 <220> FEATURE:
93 <221> NAME/KEY: misc_feature
94 <222> LOCATION: (874)...(874)
95 <223> OTHER INFORMATION: n is a, c, g, or t
97 <220> FEATURE:
98 <221> NAME/KEY: misc_feature
99 <222> LOCATION: (880)..(880)
100 <223> OTHER INFORMATION: n is a, c, g, or t
102 <220> FEATURE:
103 <221> NAME/KEY: misc feature
104 <222> LOCATION: (891)..(891)
105 <223> OTHER INFORMATION: n is a, c, \acute{g}, or t
107 <220> FEATURE:
108 <221> NAME/KEY: misc_feature
109 <222> LOCATION: (904)..(904)
110 <223> OTHER INFORMATION: n is a, c, g, or t
112 <220> FEATURE:
113 <221> NAME/KEY: misc_feature
114 <222> LOCATION: (918)..(918)
115 <223> OTHER INFORMATION: n is a, c, g, or t
117 <220> FEATURE:
118 <221> NAME/KEY: misc_feature
119 <222> LOCATION: (927)...(927)
120 <223> OTHER INFORMATION: n is a, c, g, or t
122 <220> FEATURE:
123 <221> NAME/KEY: misc_feature
```

RAW SEQUENCE LISTING DATE: 05/13/2003 PATENT APPLICATION: US/09/957,458B TIME: 16:15:14

```
124 <222> LOCATION: (929)..(929)
125 <223> OTHER INFORMATION: n is a, c, g, or t
127 <220> FEATURE:
128 <221> NAME/KEY: misc feature
129 <222> LOCATION: (935)..(935)
130 <223> OTHER INFORMATION: n is a, c, g, or t
132 <220> FEATURE:
133 <221> NAME/KEY: misc_feature
134 <222> LOCATION: (944)..(944)
135 <223> OTHER INFORMATION: n is a, c, g, or t
137 <220> FEATURE:
138 <221> NAME/KEY: misc_feature
139 <222> LOCATION: (954)..(954)
140 <223> OTHER INFORMATION: n is a, c, g, or t
142 <220> FEATURE:
143 <221> NAME/KEY: misc_feature
144 <222> LOCATION: (959)..(959)
145 <223> OTHER INFORMATION: n is a, c, g, or t
147 <220> FEATURE:
148 <221> NAME/KEY: misc_feature
149 <222> LOCATION: (967)..(969)
150 <223> OTHER INFORMATION: n is a, c, g, or t
152 <220> FEATURE:
153 <221> NAME/KEY: misc feature
154 <222> LOCATION: (972)..(972)
155 <223> OTHER INFORMATION: n is a, c, g, or t
157 <220> FEATURE:
158 <221> NAME/KEY: misc_feature
159 <222> LOCATION: (994)..(994)
160 <223> OTHER INFORMATION: n is a, c, g, or t
162 <220> FEATURE:
163 <221> NAME/KEY: misc_feature
164 <222> LOCATION: (1003)..(1003)
165 <223> OTHER INFORMATION: n is a, c, g, or t
167 <220> FEATURE:
168 <221> NAME/KEY: misc_feature
169 <222> LOCATION: (1012)..(1012)
170 <223> OTHER INFORMATION: n is a, c, g, or t
172 <220> FEATURE:
173 <221> NAME/KEY: misc_feature
174 <222> LOCATION: (1026)..(1027)
175 <223> OTHER INFORMATION: n is a, c, g, or t
177 <220> FEATURE:
178 <221> NAME/KEY: misc_feature
179 <222> LOCATION: (1038) ... (1038)
180 <223> OTHER INFORMATION: n is a, c, g, or t
182 <220> FEATURE:
183 <221> NAME/KEY: misc feature
184 <222> LOCATION: (1040)..(1041)
```

RAW SEQUENCE LISTING PATENT APPLICATION: US/09/957,458B DATE: 05/13/2003 TIME: 16:15:14

```
185 <223> OTHER INFORMATION: n is a, c, g, or t
 187 <220> FEATURE:
 188 <221> NAME/KEY: misc_feature
 189 <222> LOCATION: (1047)..(1047)
 190 <223> OTHER INFORMATION: n is a, c, g, or t
 192 <220> FEATURE:
 193 <221> NAME/KEY: misc_feature
 194 <222> LOCATION: (105\overline{0})...(1050)
 195 <223> OTHER INFORMATION: n is a, c, g, or t
 197 <220> FEATURE:
 198 <221> NAME/KEY: misc_feature
 199 <222> LOCATION: (106\overline{6})...(1066)
 200 <223> OTHER INFORMATION: n is a, c, g, or t
 202 <220> FEATURE:
 203 <221> NAME/KEY: misc_feature
 204 <222> LOCATION: (1068) ... (1068)
 205 <223> OTHER INFORMATION: n is a, c, g, or t
 207 <220> FEATURE:
 208 <221> NAME/KEY: misc_feature
 209 <222> LOCATION: (1070)..(1070)
 210 <223> OTHER INFORMATION: n is a, c, g, or t
 212 <220> FEATURE:
 213 <221> NAME/KEY: misc_feature
 214 <222> LOCATION: (107\overline{6})...(1076)
 215 <223> OTHER INFORMATION: n is a, c, g, or t
 217 <220> FEATURE:
 218 <221> NAME/KEY: misc_feature
 219 <222> LOCATION: (110\overline{4})...(1104)
220 <223> OTHER INFORMATION: n is a, c, g, or t
222 <220> FEATURE:
223 <221> NAME/KEY: misc feature
224 <222> LOCATION: (111\overline{4})...(1115)
225 <223> OTHER INFORMATION: n is a, c, g, or t
227 <220> FEATURE:
228 <221> NAME/KEY: misc_feature
229 <222> LOCATION: (1117)..(1117)
230 <223> OTHER INFORMATION: n is a, c, g, or t
232 <220> FEATURE:
233 <221> NAME/KEY: misc_feature
234 <222> LOCATION: (1120)..(1120)
235 <223> OTHER INFORMATION: n is a, c, g, or t
237 <220> FEATURE:
238 <221> NAME/KEY: misc_feature
239 <222> LOCATION: (112\overline{3})...(1123)
240 <223> OTHER INFORMATION: n is a, c, g, or t
242 <220> FEATURE:
243 <221> NAME/KEY: misc_feature
244 <222> LOCATION: (1126)..(1126)
245 <223> OTHER INFORMATION: n is a, c, g, or t
```

RAW SEQUENCE LISTING PATENT APPLICATION: US/09/957,458B DATE: 05/13/2003 TIME: 16:15:15

```
247 <220> FEATURE:
     248 <221> NAME/KEY: misc_feature
     249 <222> LOCATION: (1133)..(1133)
     250 <223> OTHER INFORMATION: n is a, c, g, or t
     252 <220> FEATURE:
     253 <221> NAME/KEY: misc feature
     254 <222> LOCATION: (1138)..(1138)
     255 <223> OTHER INFORMATION: n is a, c, q, or t
     257 <220> FEATURE:
     258 <221> NAME/KEY: misc feature
     259 <222> LOCATION: (1149)..(1149)
     260 <223> OTHER INFORMATION: n is a, c, g, or t
     262 <220> FEATURE:
     263 <221> NAME/KEY: misc feature
     264 <222> LOCATION: (1153)..(1153)
     265 <223> OTHER INFORMATION: n is a, c, g, or t
     267 <220> FEATURE:
     268 <221> NAME/KEY: misc feature
     269 <222> LOCATION: (1169)..(1174)
     270 <223> OTHER INFORMATION: n is a, c, g, or t
     272 <220> FEATURE:
     273 <221> NAME/KEY: misc feature
     274 <222> LOCATION: (166\overline{4})...(1668)
     275 <223> OTHER INFORMATION: n is a, c, g, or t
     277 <400> SEQUENCE: 1
W--> 278 gctagcgatt taggtgacac tatagaatag atctcgacnn ngtcacccct agagtcgagc
                                                                              60
     280 tgtgacggtc cttacaatga aatgcanctg ggttatcttc ttcctgatgg caggggttac
                                                                             120
     282 aggtaagggg ctcccaagtc ccaaacttga gggtccataa actctgtgac agtggcaatc
                                                                             180
     284 actttgcctt tctttctaca ggggtgaatt cggctttcac agagcattca ccgctgaccc
                                                                             240
     286 ctcaccgtcg ggacctctgt agccgctcta tctggctagc aaggaagatt cgttcagacc
                                                                             300
     288 ttgactgctc ttacggaatc ctatgtaagt tgcctatttt gctgttatct gttttccctt
                                                                             360
    290 catcttttt gatccagcaa cttaccatca cgcatcagct ccattaccaa ttgtgaaagc
                                                                             420
    480
    294 atgtgacttt attttcttcc tctgggctgt ttaggagatg aagttacttg aatgagaaaa
                                                                             540
    296 tatatatgga gttctagaaa ggattggttt atatgtcttg gaggctattt caaaatttat
                                                                             600
    298 ttggccatat attctgaata ctacctagaa cagattagcc atgggccctn tgggttnttc
                                                                             660
    300 ataagccatt gttctgaant tttttagctt tgtaaatgaa aggtttatgg gataggaaga
                                                                             720
    302 gtnctatgaa cgtgggagga atttgtaaat cctaccaatt tntnctatat agcattagcc
                                                                             780
    304 cccacctttt antattctgc atcaaaagta agattgtgtc taaagagaaa ggtnagctat
                                                                             840
    306 caaaaggact cctataanat tcnttggaaa cttntggaan tgtcaaattt ntttgagcta
    308 attnttggag ttccaaantt tgtcttntna cagtnaaggg gganccccat tcanatttnc
                                                                             960
    310 ccccctnnng anaatgcttg ggggaaaaaa cctnccaacc ccnttgtggg angaagtttt
                                                                            1020
    312 tttaannttt taaggetngn ngaaacnggn ttttaatttt ttgggnenan cgcetnteec
                                                                            1080
    314 cggtaccagg aaaatcagga cctntttttg gggnngngcn ccnacngggg ggnaaaangg
                                                                            1140
    316 gaaatttcnt canaaaaaat cttttccgnn nnnngtgaag catcagggcc tgaacaagaa
                                                                            1200
    318 catcaacctg gactctgcgg atgggatgcc agtggcaagc actgatcagt ggagtgagct
                                                                            1260
    320 gaccgaggca gagcgactcc aagagaacct tcaagcttat cgtaccttcc atgttttgtt
                                                                            1320
    322 ggccaggctc ttagaagacc agcaggtgca ttttacccca accgaaggtg acttccatca
                                                                            1380
    324 agctatacat accettette tecaagtege tgeetttgea taccagatag aggagttaat
                                                                            1440
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/13/2003 PATENT APPLICATION: US/09/957,458B TIME: 16:15:16

Input Set : A:\US09957458.ST25.txt

Output Set: N:\CRF4\05132003\1957458B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 39,40,41,87,650,657,679,723,762,764;792,834,858,863,874,880
Seq#:1; N Pos. 891,904,918,927,929,935,944,954,959,967,968,969,972,994,1003-Seq#:1; N Pos. 1942,1026,1027,1038,1040,1041,1047,1050,1066,1068,1070,1076
Seq#:1; N Pos. 1104,1414,1115,1417,1120,1123,1126,1133,1138,1149,1153,1169
Seq#:1; N Pos. 4170,1171,1172,1173,1474,1664,1665,1666,1667,1668-Seq#:3; N Pos. 35,36,82,645,652,674,718,757,759,787,829,853,858,869,875,886
Seq#:3; N Pos. 899,913,922,924,930,939,949,954,962,963,964,967,989,998,1007
Seq#:3; N Pos. 1021,1022,1033,1035,1036,1042,1045,1061,1063,1065,1071,1099
Seq#:3; N Pos. 1109,1110,1112,1115,1118,1121,1128,1133,1144,1148,1164,1165
Seq#:3; N Pos. 1166,1167,1168,1169,1659,1660,1661,1662,1663
Seq#:6; N Pos. 2283,2284,2285,2286,2287,2288,2289,2290

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/957,458B

DATE: 05/13/2003 TIME: 16:15:16

Input Set : A:\US09957458.ST25.txt

Output Set: N:\CRF4\05132003\I957458B.raw

L:278 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0

M:341 Repeated in SeqNo=1

L:1046 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0

M:341 Repeated in SeqNo=3

L:1834 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:420

M:341 Repeated in SeqNo=6